

What is claimed is:

1. A method usable with a fuel cell stack, comprising:
 2. providing a fuel flow to the fuel cell stack to produce power; at least some of the power being consumed by a first load;
 4. in response to a decrease in at least one of the power produced by the fuel cell stack and the power consumed by the first load, determining whether to route at least some of the power produced by the fuel cell stack and not consumed by the first load to a second load;
 5. and
 8. based on the determination, selectively routing said at least some of the power produced by the fuel cell stack and not consumed by the first load to the second load.

1. 2. The method of claim 1, wherein the determining comprises:
2. determining whether the second load is capable of receiving said at least some of the power produced by the fuel cell stack and not consumed by the first load.

1. 3. The method of claim 1, wherein
2. the second load comprises a battery; and
3. the determining comprises determining whether the battery is capable of being
4. charged using said power produced by the fuel cell stack and not consumed by the first load.

1. 4. The method of claim 1, wherein
2. the second load comprises a battery; and
3. the selectively routing comprises selectively charging the battery based on the
4. determination.

1. 5. The method of claim 4, wherein the charging comprises regulating a terminal
2. voltage of the battery to cause the battery to charge.

1. 6. The method of claim 1, further comprising:
2. decreasing the fuel flow in response to the detection of the decrease.

1 *62* 7. The method of claim 6, wherein the routing occurs until the fuel flow is
2 decreased to a level at which the power routed to the load is approximately zero.

1 8. The method of claim 1, wherein
2 the providing comprises operating a fuel processor to provide the fuel flow.

1 9. A system comprising:

2 a first load;

3 a second load;

4 a fuel processor to provide a fuel flow;

5 a fuel cell stack coupled to the first load and adapted to provide a power in response

to the fuel flow, at least some of the power being consumed by the first load; and

7 a circuit adapted to:

in response to a decrease in the power produced by the fuel cell stack and consumed by the first load, determine whether to route at least some of the power produced by the fuel cell stack and not consumed by the first load to the second load, and based on the determination, selectively route said at least some of the power produced by the fuel cell stack and not consumed by the first load to the second load.

1 10. The system of claim 9, wherein the circuit determines whether the second load
2 is capable of receiving said at least some of the power produced by the fuel cell stack and not
3 consumed by the first load.

11. The system of claim 9, wherein the circuit comprises a controller.

12. The system of claim 9, wherein

2 the second load comprises a battery; and

3 the circuit is adapted to determine whether the battery is capable of being charged
4 using said power produced by the fuel cell stack and not consumed by the first load.

1 13. The system of claim 12, wherein the circuit determines whether the battery is
2 capable of being charged by examining a terminal voltage of the battery.

1 14. The system of claim 9, wherein
2 the second load comprises a battery; and
3 the circuit is adapted to selectively charge the battery based on the determination.

1 15. The system of claim 14, further comprising:
2 a voltage regulator coupled between the fuel cell stack and the second load to provide
3 a voltage across terminals of the battery,
4 wherein the circuit is adapted to interact with the voltage regulator to adjust the
5 voltage to cause the battery to charge.

1 16. The system of claim 9, wherein the circuit is adapted to decrease the fuel flow
2 in response to the detection of the decrease.

1 17. The system of claim 16, wherein the circuit is adapted to decrease the fuel
2 flow at a rate that does not exceed a predefined rate.

1 18. The system of claim 17, wherein the circuit routes said at least some of the
2 power produced by the fuel cell stack and not consumed by the first load to the second load
3 until the fuel flow is decreased to a level at which the power routed to the first load is
4 approximately zero.